

29 Project justification and conclusion

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This chapter presents the justification for the Concept and Stage 1 and a conclusion to the Environmental Impact Statement. The justification is based on the strategic need for the Concept and Stage 1 and in particular whether the Concept and Stage 1 has achieved the objectives of Sydney Metro West and has met the object of the *Environmental Planning and Assessment Act 1979*.

29.1 Summary of strategic need

Sydney Metro is Australia's biggest public transport project. Services between Rouse Hill and Chatswood started in May 2019 on the first stage of this new stand-alone automated railway network, which is revolutionising the way Sydney travels.

Sydney is expanding and the NSW Government is working hard to deliver an integrated transport system that meets the needs of customers now and in the future. The delivery of Sydney Metro West, is critical to keeping Sydney moving.

Sydney Metro West would involve the construction and operation of a largely underground metro rail line, around 24 kilometres long between Westmead and the Sydney CBD including new metro stations at Westmead, Parramatta, Sydney Olympic Park, North Strathfield, Burwood North, Five Dock, The Bays and Sydney CBD. The location of the Sydney CBD station will be determined following further investigations and community and stakeholder engagement.

Sydney Metro West would provide city-shaping benefits as the significant increase in transport connectivity, capacity and amenity in the Greater Parramatta to Sydney CBD corridor would boost the economic productivity of Sydney and unlock planned land use outcomes in the CBDs, planned precincts and urban renewal areas.

Sydney Metro West would also provide a fast, reliable and frequent connection between Greater Parramatta and the Sydney CBD and would:

- Provide a direct, fast, reliable and frequent connection between Greater Parramatta and the Sydney CBD, linking communities along the way that have previously not been serviced by rail
- Relieve the congested T1 Western Line, T9 Northern Line and T2 Inner West and Leppington Line
- Double the rail capacity between the Parramatta and Sydney CBDs
- Significantly boost economic opportunities for Greater Parramatta
- Support new residential and employment zones along the Greater Parramatta to Sydney CBD corridor, including at Sydney Olympic Park and The Bays – providing improved transport for the additional 420,000 new residents and 300,000 new workers forecast to be located within the corridor over the next 20 years
- Allow customers fast and easy transfers with the T1 Western Line at Westmead, T9 Northern Line at North Strathfield and the Sydney Trains suburban rail network and Sydney Metro in the Sydney CBD
- Allow for transfers with the future Parramatta Light Rail (Stage 1) at Westmead and Parramatta, as well as the planned Parramatta Light Rail (Stage 2) at Sydney Olympic Park
- Create an anticipated 10,000 direct and 70,000 indirect jobs during construction (based on Sydney Metro analysis).

Seeking planning approval for Stage 1, for the major civil construction work between Westmead and The Bays would allow:

- Additional time to consult with the stakeholders on the end-state design of stations including urban design, transport integration and placemaking outcomes
- Earlier commencement of critical construction activities which would allow Sydney Metro West as a whole to be delivered quicker and more efficiently facilitating earlier realisation of the benefits of Sydney Metro West
- Each future planning approval stage to be focussed on the critical issues associated with the particular works and the particular locations
- Additional time to solve certain design elements including the station location and tunnel alignment through the complex Sydney CBD environment.

Biophysical, economic and social considerations have been assessed in the context of the principles of ecologically sustainable development. This is discussed in Chapter 27 (Synthesis of the Environmental Impact Statement) and summarised below:

- **Precautionary principle:** The environmental risk analysis documented in Chapter 28 (Environmental risk analysis) addresses the potential impacts of the Concept and Stage 1. That analysis, together with the assessment carried out in preparing this Environmental Impact Statement indicates that there would be no threat of serious or irreversible damage to the environment
- **Intergenerational equity:** The objectives of Sydney Metro West are essentially around ensuring an efficient and reliable public transport network. This would benefit current and future generations. Once operational, Sydney Metro West would leave a positive legacy for future generations. It would provide long term benefits by strengthening connections and access across Sydney, providing improved connectivity on the rail network and improving the capacity, reliability and efficiency of the existing transport system
- **Conservation of biological diversity and ecological integrity:** Conservation of biological diversity and ecological integrity has been considered throughout the development and design stages. The construction footprint has been developed to avoid or minimise impact to areas of high ecological value. Detailed assessments have been carried out to identify flora and fauna impacts and a range of mitigation measures identified for implementation as detailed in Chapter 22 (Biodiversity – Stage 1). Impacts on biological diversity and ecological integrity have been assessed as minor
- **Improved valuation and pricing of environmental resources:** The value placed on the environment was inherent in the development of the design. In addition, the costs associated with the planning and design of measures to avoid/minimise adverse environmental impacts and the costs to implement them have been built into the overall costs. Ongoing and detailed design together with specific issue-based management plans would represent further commitment to the recognition of the value of protecting environmental resources.

29.2 Achieving the Sydney Metro West objectives

Table 29-1 and Table 29-2 provides an assessment of the Concept and Stage 1 against the Sydney Metro West network and corridor objectives as detailed in Chapter 2 (Strategic need and justification).

Table 29-1: Assessment against the Sydney Metro West network objectives

Sydney Metro West objectives	Assessment
Ensure transport services are meeting the needs of customers	<ul style="list-style-type: none"> Relieves the congested T1 Western Line, T9 Northern Line and T2 Inner West and Leppington Line Provides travel-time savings for customers in Western Sydney and along the corridor Reduces station crowding at some stations Provides rail transport to areas where this is currently not available.
Deliver outcomes that align with and support key strategic land use and transport frameworks including the Smart Cities Plan, Greater Sydney Region Plan, Future Transport Strategy and the relevant District Plans	<ul style="list-style-type: none"> Connects Greater Parramatta and the Sydney CBD and support the vision for a metropolis of three cities Supports the delivery of the '30-minute city' as identified in Future Transport 2056 strategy Acts as a catalyst for realising the vision of the Greater Parramatta and the Olympic Peninsula Reinforces Greater Parramatta as the Central River City.
Boost Sydney's international competitiveness, productivity and employment growth by supporting new and existing strategic centres	<ul style="list-style-type: none"> Supports three-cities vision to re-balance economic opportunities Parramatta CBD would become more attractive for business investment, and facilitates the planned growth of an additional 49,000 jobs by 2036 Facilitates the planned growth of an additional 70,000 jobs by 2036 in the Westmead health and medical research innovation district, Sydney Olympic Park state significant lifestyle precinct and The Bays future knowledge hub Improves connectivity to major attractions and key precincts located along the corridor, including Sydney Olympic Park and The Bays.
Support future housing needs by increasing housing supply, choice and affordability	<ul style="list-style-type: none"> Facilitates the planned growth for an additional 46,000 homes within the walking catchment of proposed metro stations Facilitates more choices of affordable housing close to where people work resulting in: <ul style="list-style-type: none"> Improved liveability from improved commute time and a less congested transport network Improved household budgets from reduced reliance on cars Lower cost for parking spaces in new developments.
Improve liveability and provide a catalyst for positive change by enabling urban renewal opportunities, enhancing housing supply and supporting productivity of centres	<ul style="list-style-type: none"> Supports the masterplanned growth in precincts and urban renewal areas targeting an additional 169,000 jobs and 46,000 dwellings for 106,000 people between 2016 and 2036 Centralised growth would be accommodated within masterplanned precincts and urban renewal areas. This would streamline opportunities for masterplanned growth with careful planning of transport, social infrastructure, services and placemaking More opportunities for people to live close to where they work in mixed-use precincts such as Westmead, Sydney Olympic Park and The Bays while: <ul style="list-style-type: none"> Reducing impacts on amenity from continued reliance on cars Increasing opportunities for walking and cycling.
Improve access to and resilience of the transport network through integrated land use and transport planning, including integration of Sydney Metro West with other modes	<ul style="list-style-type: none"> Effectively doubles rail capacity from Parramatta to the Sydney CBD with the delivery of a new high capacity rail connection Reduces congestion and help alleviate platform and station crowding Provides new stations at localities not serviced by the existing Sydney Trains suburban rail network, including Burwood North, Five Dock and The Bays Provides a more direct connection to Sydney Olympic Park Provides additional interchange capability at Westmead, North Strathfield and in the Sydney CBD.

Sydney Metro West objectives	Assessment
Ensure value for money and a sustainable and deliverable solution.	<ul style="list-style-type: none"> Decreased emissions from reliance on cars to support Sydney's growing population Proactively addresses forecast future crowding issues before the rail network reaches capacity and results in economic impacts Supports timely investment in planned urban renewal and growth areas attracting businesses, workers and residents.

Table 29-2: Assessment against the Sydney Metro West Greater Parramatta to Sydney CBD corridor objectives

Sydney Metro West objectives	Assessment
Contribute towards the vision for a three cities metropolis established by the Greater Sydney Commission including the '30-minute city' concept	<ul style="list-style-type: none"> Supports the vision for 30-minute cities as outlined in the Greater Sydney Region Plan by providing customers an easy connection to key destinations including cities, health and education precincts, diverse employment centres and residential precincts Enables an additional 730,000 jobs and 630,000 people to be within 30-minutes of the Parramatta and Sydney CBD.
Support additional housing supply and employment growth opportunities and support urban renewal initiatives within the Greater Parramatta to Sydney CBD corridor including key government precincts such as the Greater Parramatta and Olympic Peninsula and The Bays	<ul style="list-style-type: none"> Supports planned improvements in land use and a broader range of housing opportunities, which can offer improved and more affordable housing with better access to services and employment, and improved liveability By improving the connections between key economic centres, Sydney Metro West would foster significant growth in jobs Directly supports the creation of new jobs within the corridor, particularly at key precincts including Westmead, Parramatta, Sydney Olympic Park and The Bays Enables an additional 169,000 jobs within walking catchments of proposed metro stations. Of these new jobs, 47 per cent would not otherwise be achieved without Sydney Metro West.
Achieve customer outcomes including relieving congestion on the busy T1 Western Line and T2 Inner West and Leppington Line, increased rail patronage and mode shift, reduced travel times between key destinations, providing new access to mass transit rail and relieving bus and road congestion in the western corridor	<ul style="list-style-type: none"> Effectively doubles rail capacity from Parramatta to the Sydney CBD moving up to 40,000 people an hour in each direction Significantly reduces train crowding on the T1 Western Line, T2 Inner West and Leppington Line and the T9 Northern Line Reduces crowding at Central, Parramatta, Strathfield, Epping and Burwood stations Substantially improves the public transport network accessibility to key economic centres across the Greater Parramatta to Sydney CBD corridor Increases the reach and use of Sydney's public transport network by providing new stations, increasing access to Parramatta and Sydney CBDs by rail, providing a direct connection to Sydney Olympic Park and additional interchange capability at Westmead, North Strathfield and Sydney CBD Improves travel times between key employment centres such as Parramatta, Sydney CBD, North Sydney, Chatswood and Sydney Olympic Park Improves resilience within the public transport network by providing an alternative to the existing Sydney Trains suburban railway route for customers during planned and unplanned network incidents Provides the opportunity to optimise the bus network by reducing the number of buses on congested corridors such as Parramatta Road and Victoria Road and increasing bus services on other parts of the network Provides the opportunity for mode shift from car to public transport, which could result in road user travel time savings.

29.3 Objects of the Environmental Planning and Assessment Act 1979

The objects of the *Environmental Planning and Assessment Act 1979* (EP&A Act) provide a policy framework within which the justification of the Sydney Metro West can be considered. Table 29-3 outlines those objects and provides comment on their relevance to Sydney Metro West.

Table 29-3: Relevance of the Objects of the EP&A Act to Sydney Metro West

Environmental Planning and Assessment Act 1979 Objects	Comments
To promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources	Sydney Metro West has been designed to avoid impacts on the environment and to minimise the need for land acquisition, as well as impacts on existing development and local communities. Sydney Metro West has been designed to conserve the State's natural and other resources. During construction and operation of Sydney Metro West, opportunities would be taken to reduce material use and maximise the use of materials with low embodied environmental impact, where practical. In particular water efficiency measures would be implemented with a focus on achieving water savings and targeting water recycling and reuse.
To facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment	Sustainability has been a key driver for Sydney Metro West. Sydney Metro West is supported by the Sydney Metro Environmental and Sustainability Policy and the future development of a Sydney Metro West Sustainability Plan (refer to Chapter 26 (Sustainability and climate change - Stage 1)). Further details on addressing the principles of ecologically sustainable development are also provided in Chapter 27 (Synthesis of the Environmental Impact Statement).
To promote the orderly and economic use and development of land	Sydney Metro West would provide a significant increase in transport connectivity, capacity and amenity in the Greater Parramatta to Sydney CBD corridor, which would boost the economic productivity of Sydney and unlock planned land use outcomes in the CBDs, planned precincts and urban renewal areas including The Bays, the Parramatta Road Corridor, Sydney Olympic Park, and Westmead. It has been designed to minimise impacts to the surrounding natural and built environments, and to minimise disruption to existing development patterns. Provision of a mostly underground metro system is an orderly and economic approach to delivery of the Sydney Metro West in the context of existing development along the corridor.
To promote the delivery and maintenance of affordable housing	Sydney Metro West would provide public transport accessibility to future growth areas including The Bays, the Parramatta Road Corridor, Sydney Olympic Park, and Westmead and an affordable transport option for future residents. This would support the planned growth for an additional 46,000 homes in the corridor by 2036.
To protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats	Stage 1 is largely contained within a highly urbanised area that does not possess large expanses of intact native vegetation with high biodiversity value. As the majority of Stage 1 would be underground or in pre-existing built-up areas, direct impacts to terrestrial biodiversity has been largely avoided and/or minimised. Sydney Metro West impacts on terrestrial and aquatic ecology have been assessed in detail and measures to avoid, mitigate and offset potential impacts on native animals and plants have been developed (refer to Chapter 22 (Biodiversity - Stage 1)).

Environmental Planning and Assessment Act 1979 Objects	Comments
To promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage)	The design development of Stage 1 has included a focus on avoiding or minimising potential Aboriginal and non-Aboriginal heritage impacts. This has included developing a tunnel alignment and selecting construction sites that avoid potential direct impacts to heritage items and potential archaeological sites. Impacts on heritage items would be minimised during construction and works would be carried out in accordance with relevant management strategies for specific heritage items where impacts are unavoidable.
To promote good design and amenity of the built environment	Sydney Metro West has been designed to minimise impacts to community facilities and open space. Landscape character and visual amenity impacts from Stage 1 would be managed in accordance with the Construction Environmental Management Framework, which specifies key operational requirements, environmental management procedures, and a communications and consultation strategy. The approach to design and placemaking for the Sydney Metro West Concept, as well as place and design principles for each of the metro stations and facilities, is discussed in Chapter 7 (Placemaking).
To promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants	The construction of all buildings would be completed consistent with the applicable Australian and international safety standards.
To promote the sharing of the responsibility for environmental planning between the different levels of government in the State	The responsibility for environmental planning and approval in relation to Sydney Metro West rests primarily with the NSW Government. Consultation has however, occurred across all levels of the government including councils for the seven local government areas through which Sydney Metro West passes, including City of Cumberland, City of Parramatta, Municipality of Strathfield, Municipality of Burwood, City of Canada Bay, Inner West Council and the City of Sydney.
To provide increased opportunity for community participation in environmental planning and assessment	The Sydney Metro West development process has involved extensive consultation with the community and stakeholders (refer to Chapter 5 (Stakeholder and community engagement)).

29.4 Conclusion

Sydney Metro West has been assessed as critical State significant infrastructure in accordance with the provisions under Division 5.2 of Part 5 of the EP&A Act. In particular, it addresses the requirements of the Secretary of the Department of Planning, Industry and Environment. It also includes consideration of the issues raised by the community and stakeholders during the development of Sydney Metro West.

Key environmental issues have been examined throughout the design development process. Consultation has been carried out with affected stakeholders during the assessment process so that key potential impacts of the Concept and Stage 1 have been identified at an early stage, and where possible, avoided or appropriate mitigation measures developed. This has resulted in a number of changes to the earlier designs that have mitigated many of the potential significant impacts.

Notwithstanding, it is inevitable that a project of this scale and location in a heavily urbanised environment would have some residual (unavoidable) impacts, particularly during construction.

Key potential residual impacts associated with Stage 1 are identified in Chapters 10 to 26 and would largely include:

- Potential temporary construction traffic and pedestrian impacts with respect to temporary road closures and local traffic diversions
- Potential temporary construction noise and vibration
- Some moderate potential impacts on State heritage items and on some Aboriginal and non-Aboriginal archaeological deposits
- Potential temporary local community amenity impacts associated with an increase in noise levels, traffic movements and congestion, dust, and changes in visual outlook
- Potential temporary cumulative impacts given the potential overlap with a number of large infrastructure projects in the Parramatta area and around The Bays.

The potential residual impacts identified would not result in any unacceptable impacts and further mitigation would be considered during the detailed design stage including the decision on appropriate construction methodologies and the implementation of the environmental management practices.

With respect to the Concept, some uncertainties remain, including overall construction staging, and the location of the metro station and the tunnel alignment in the Sydney CBD. At this stage, a reasonable worst case assessment indicates that any adverse impacts during construction and operation would be similar to those identified for Stage 1 and no unacceptable impacts are anticipated. These uncertainties and issues will be addressed in future stage(s) which requires assessment and approval of more detailed development application(s).

Identified potential residual impacts need to be considered within the context of the overall objectives of Sydney Metro West and the significant transportation and other benefits that Sydney Metro West would provide over the medium to longer term and particularly for future generations. The consequences of not proceeding (do nothing) would result in unacceptable impacts on the transport network, particularly in terms of the inability to support growth and urban renewal. This would ultimately constrain Sydney's future liveability and global competitiveness.

On balancing the strategic need and benefits of the project with the residual impacts, Sydney Metro West is considered to be in the public interest.